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Catalogue of a small Collection of HYMENOPTERA made in New Mexico during the summer of 1867.

BY E. T. CRESSON.

The species comprised in this catalogue were collected in New Mexico, during the summer of 1867, by Dr. Samuel Lewis, while accompanying the Survey of the Pacific Railway, E.D., from Fort Wallace, Colorado, to Fort Craig, New Mexico. Dr. Lewis's specialty being Coleoptera, he made no effort to collect any other Order, and the species enumerated below were accidentally captured in the net while sweeping. The fact of nearly one-half of the species collected being undescribed, shows what a rich harvest a good collector of Hymenoptera could reap in that region of our country. The entire collection has been kindly presented to this Society by the collector.

1. *Urocerus areolatus*, n. sp.

Female.—Black, with a bluish-green reflection; head clothed with black hairs; vertex with large, deep, confluent punctures, and three rather deep, longitudinal furrows; the surface around and about the ocelli, rugose; cheeks polished, sparsely punctured; clypeus longitudinally striated; antennæ black, shining, punctured, as long as the head and thorax, 24-jointed; thorax above coarsely rugose, except middle of mesothorax, which is almost smooth; sides of prothorax above more coarsely rugose than rest of thorax; pleura subdepressed on the sides, coarsely punctured; wings violaceous-black, darker at base and



along costa, neuration as in the accompanying figure; legs slender, entirely shining black, tinged with blue-green, femora deeply punctured, first joint of posterior tarsus three-fourths the length of the tibia; claws rufo-piceous, with a strong inner tooth, removed from the tip; abdomen above steel-blue, with a slight velvety appearance, very finely sculptured; the venter and sides of dorsal segments shining and tinged with greenish, the former sparsely punctured; terminal dorsal impression deep and rounded; anal horn (cornus) shaped much as in *U. cyaneus*, being acutely conical, not at all shouldered, much flattened at base above, apex tuberculate, serrate on the sides; ninth segment convex on the sides, smooth and polished, with a few scattered punctures; ovipositor longer than the abdomen, piceous. Length 14 lines; with ovipositor 17 lines.

One ♀ specimen. Closely allied to *U. Edwardsii*, but distinct by the different shape of the anal horn of the abdomen. The presence of an areolet beneath the third submarginal cell on anterior wings may be accidental, although it is exactly the same on both wings; the left anterior wing has the separating nervure between the second and third submarginal cells incomplete; the second branchial cell has a complete cross-nervure.

2. *Mutilla bioculata*, Cresson.

Mutilla bioculata, Cresson, Proc. Ent. Soc. Phil. iv, p. 431. (1865).

One ♂ specimen.

3. *Mutilla californica*, Radochk.

Mutilla californica, Radochk. Cresson l. c.

One ♀ specimen.

4. *Mutilla fulvohirta*, Cresson.

Mutilla fulvohirta, Cresson, l. c., p. 433.

One ♂ specimen. This will probably prove to be the ♂ of *californica*.

5. *Scolia (Discolia) Lecontei*, n. sp.

Female.—Head black, sparsely punctured, a large rufous spot on the front, extending from the lower ocellus to and including the space between the antennæ, and also the emargination of the eyes; posterior orbits, clypeus and mandibles, except tips, rufous; occiput clothed with a dense golden pubescence; antennæ short, robust, black, scape dull rufous; thorax with deep, rather close punctures; prothorax, except its anterior middle, extreme lateral margin of mesothorax, tegulæ and scutellum rufous, the latter flat, with a few scattering, deep punctures; postscutellum bright yellow; rest of thorax black, sparsely clothed with golden pubescence, more dense on prothorax in front, and on metathorax, the prominent, lateral lobes of the latter with an obscure rufous spot; wings fusco-hyaline, strongly tinged with yellowish, especially along the costa to the tip of the marginal cell, beyond which it is violaceous-black; both wings have a beautiful purple reflection, especially towards the apical margin; anterior wing with two submarginal cells, the second receiving one recurrent nervure; legs rufo-ferruginous, clothed with yellowish hair, most of coxæ black; abdomen rufo-ferruginous, sparsely punctured, shining, second to fifth segments above stained more or less with blackish, second and third segments above with a large, ovate, bright yellow spot on each side, nearly meeting on the disk, those on the third segment more transverse and regular; fourth segment with a transverse yellow band at tip; fifth segment with

a subobsolete, narrow, yellowish stripe near the tip, sub-interrupted in the middle; apical margins of all the segments with a dense, rather long fringe of yellowish hairs; venter dull ferruginous, the third segment black at base. Length 6 lines.

One ♀ specimen. At first sight this species has much the appearance of *Elis Xantiana* Sauss.

6. *Scolia* (*Discolia*) *flavocostalis*, n. sp.

Male.—Black, deeply and rather closely punctured, clothed with long, golden pubescence; a spot on the anterior orbits, below the emargination of the eyes, and a narrow line on lower half of posterior orbits, yellow; mandibles bright fulvous, black at tips; antennæ entirely black, robust; a spot on each side of prothorax anteriorly and another on postscutellum, yellow; scutellum with large, scattered punctures; tegulæ fulvous; wings hyaline, with an opaline reflection, costa broadly yellow to the tip of marginal cell, beyond which it is violaceous-black; anterior wing with two submarginal cells, the second receiving one recurrent nervure; legs rufo-ferruginous, clothed with yellowish hair, most of coxæ black; abdomen black, clothed with yellowish hair, especially dense on the apical margins of the segments, apex of the three basal segments more or less ferruginous; on each side of second and third segments above a yellow ovate spot, large and transverse on the third segment; fourth segment with a narrow, apical, yellow band, interrupted in the middle, and dilated laterally; apex with three short spines; venter blackish, most of the second segment ferruginous. Length $4\frac{1}{2}$ lines.

One ♂ specimen. This may be the ♂ of *S. Lewisii*. It is however much smaller.

7. *Elis* (*Trielis*) *Xantiana*, Sauss.*

Elis Xantiana, Sauss., Ann. Soc. Ent. Fr. 4e sér iii, p. 18, ♂ ♀; Cat. Spec

Gen. *Scolia*, p. 149, pl. 1, fig. 10 ♀, 11 ♂.

Scolia regina, Cresson, l. c., p. 447, ♀.

?*Scolia flavosignata*, Cresson, l. c., p. 449, ♂.

Two ♀ specimens.

* Since the publication of the 2d Part of my Paper on the Hymenoptera of Colorado Territory (*Proc. Ent. Soc. Phil.* iv, p. 426, 1865,) I have seen Dr. de Saussure's Paper, entitled "*Sur quelques Scolies de Basse-Californie*" (*Ann. Soc. Ent. Fr. 4e sér.* iii, p. 18, 1863); in which he describes several species apparently identical with specimens from Colorado and New Mexico. The identity of his *Elis Xantiana* ♀ with my *Scolia regina* ♀, is decided by a specimen kindly communicated to me by Mr. Norton, who has also sent me a specimen, described by the same author as the ♂ of *Xantiana*, and which is identical with a species from Colorado described by me as *flavosignata*. I had been led to suppose,

8. *Elis* (*Trielis*) *zonaria*, Cresson.

Scolia consors, Cresson, l. c., p. 449, ♂. (nec Sauss.)

One ♂ specimen.

9. *Elis* (*Dielis*) *plumipes*, Drury.

Sphex plumipes, Drury, Exot. Ins. i, pl. 44, fig. 5, ♀.

Scolia radula, Fabr., Ent. Syst. ii, p. 232, ♂.

Scolia fossulana, Fabr., Syst. Piez. p. 242, ♀.

Colpa fossulana, St. Farg., Hym. iii, p. 540.

Scolia confluenta, Say, Am. Ent. pl. 29; Bost. Jour. i, p. 364.

Elis plumipes, Sauss., Ann. Soc. Ent. Fr. 1858, 245; Cat. Spec. Gen. Scolia, p. 243, ♂ ♀.

Two ♀, one ♂, specimens.

10. *Pompilus marginatus*, Say.

Pompilus marginatus, Say, Long's Second Exped. ii, p. 333. Cresson, Trans. Am. Ent. Soc. i, p. 68.

Pompilus (*Miscus*) *petiolatus*, Say, Bost. Jour. Nat. Hist. i, p. 305.

One ♀ specimen.

11. *Pompilus* (*Priocnemis*) *terminatus*, Say.

Pompilus terminatus, Say, Amer. Ent. pl. 42; Cresson, Trans. Am. Ent. Soc. i, p. 113.

Two ♀ specimens.

12. *Pepsis formosa*, Say.

Pompilus formosus, Say, West. Quart. Rep. ii, p. 76; Amer. Ent. pl. 42.

Pepsis formosa, Cresson, Trans. Am. Ent. Soc. i, p. 144.

Two ♀ specimens.

13. *Ammophila varipes*, Cresson.

Ammophila varipes, Cresson, Proc. Ent. Soc. Phil. iv, p. 457. (1865).

Three ♀ specimens.

14. *Coloptera Wrightii*, n. sp.

Female.—Fulvo-ferruginous, smooth and polished; head broad, flattened; clypeus tinged with yellowish, tips of mandibles and of antennæ, black; cheeks with a few scattering pale hairs; thorax subopaque, finely aciculate, transversely so above, obliquely so on pleura and sides of metathorax; pleura and tip of metathorax with a dense, fine, silvery pile; tip of metathorax with a bilobed black spot; wings short, hya-

that my *consors* (l. c., p. 449) would prove to be the ♂ of *regina*, which supposition was strengthened by the capture of both the last named species in New Mexico by Dr. Lewis. Dr. de Saussure may, however, be correct, and my *consors* may be a distinct species. In this case the name of the latter species must be changed to that of *zonaria*, the former name being used by Dr. de Saussure in the paper above quoted.

Scolia Ridingsii, Cress., from Colorado, seems to agree very well with Dr. de Saussure's description of what he decides to be a variety of *nobilitata* Fabr. (l. c., p. 18), but which, I think, is a distinct, though closely allied, species.

line; coxæ more or less silvery, the posterior pair black behind; abdomen highly polished, the petioles slender, as long as the thorax, very slightly and gradually thickened to the tip; second petiole with a stain near base and apex, and a transverse stain on the middle of the remaining segments (which are together not as long as the petioles and are oval in form), blackish, more distinct laterally. Length $5\frac{1}{2}$ lines; expanse of wings 5 lines.

One ♀ specimen. This is the only species belonging to the genus *Coloptera* that has as yet been discovered in America, the only two species hitherto described having their habitat in Algeria and Guinea.

At the request of Dr. Lewis, this pretty little species is respectfully dedicated to General W. W. Wright, Chief Engineer of the Pacific Railway, E. D.

15. *Priononyx Thomæ*, Fabr.

Spheg Thomæ, Fabr., Ent. Syst. ii, p. 199.

Pepsis Thomæ, Fabr. Syst. Piez. p. 209.

Priononyx Thomæ, Dahlb., Hym. Eur. i, p. 28. Saussure, Novara Exped. Hym. p. 43.

One ♀ specimen.

16. *Priononyx atrata*, St. Farg.

Spheg atrata, St. Farg., Hym. iii, p. 355.

Priononyx atrata, Smith, Brit. Mus. Cat. Hym. iv, p. 266.

One ♀ specimen.

17. *Larrada abdominalis*, Say.

Larra abdominalis, Say, West. Quart. Rep. ii, p. 77. (1823).

One ♀ specimen.

18. *Larra uncinata*, Say.

Stizus uncinata, Say, West. Quart. Rep. ii, p. 77; Amer. Ent. pl. 2.

Larra uncinata, Cresson, Proc. Ent. Soc. Phil. iv, p. 472. Packard, ib. vi, p. 444.

Twelve ♂ ♀ specimens.

19. *Gorytes propinquus*, n. sp.

Female.—Black, polished, sericeous; face narrowed beneath, eyes large; narrow frontal orbits, conical space beneath antennæ, clypeus, mandibles, except tips, and the palpi, pale yellowish; clypeus convex, its anterior margin subsinuate; antennæ slightly thickened toward the tips, fulvous, the three or four apical joints black; thorax impunctured; posterior margin of prothorax, tubercles, line over the tegulæ, large spot on each side of pleura beneath anterior wing, a small spot beneath posterior wing, scutellum, except basal margin, postscutellum, tegulæ, and a large ovate spot on each side of metathorax, pale yellowish; the

triangular basal space of metathorax deeply channeled down the middle; wings fuscous, the apex of the anterior pair subhyaline, stigma and costal nerve yellowish; third submarginal cell quadrangular, oblique; legs pale yellowish, the coxæ black, and the femora fulvous; abdomen subpetiolate, pale yellowish; extreme base of first segment, a transverse, wavy band before the middle of the second, sometimes slightly interrupted, and a broad band at base of the third, fourth and fifth segments, narrowed to a point laterally, black; the black band on third segment is continued beneath; abdomen impunctured. Length $4\frac{1}{2}$ lines.

Described from three ♀ specimens, two of which were collected in Texas by Dr. Gideon Linneecum. This is closely allied to *G. abdominalis* from Colorado.

20. *Gorytes tricolor*, n. sp.

Female.—Black, shining, sparsely punctured, subsericeous; broad frontal orbits, spot beneath antennæ, clypeus, mandibles, except tips, and the palpi, lemon-yellow; face scarcely narrowed beneath; clypeus, flattened, its anterior margin truncate; antennæ brown-black, the scape beneath yellow; posterior margin of prothorax, tubercles, scutellum, spot over the tegulæ, and a transverse line behind tubercles, shading into ferruginous beneath, lemon-yellow; tegulæ, and the metathorax, except basal enclosed space, ferruginous; scutellum crenulated at base; metathorax rounded above and laterally, subtruncate behind; wings subhyaline, the marginal and part of submarginal cells and a longitudinal streak about the middle of the wing, fuliginous; stigma and costal nerve fulvous; third submarginal cell quadrate, scarcely at all oblique; legs ferruginous, the tarsi and part of the posterior tibiæ yellowish; abdomen ovate, convex, polished, the second segment and the following segments toward the apex, with scattering punctures; the basal and three apical segments ferruginous, the apex of the former with a broad lemon-yellow fascia, narrowed in the middle anteriorly; second, third and fourth segments each with a straight lemon-yellow fascia at apex, broadest on the second segment; beneath, the base and apex, and the apical margins of the second, third and fourth segments, ferruginous, the second and third segments with a lateral yellow spot at apex. Length 4 lines.

One ♀ specimen.

21. *Odynerus annulatus*, Say.

Odynerus annulatus, Say, Long's Second Exped. ii, p. 348.

Two ♀ specimens.

22. *Odynerus rufinodus*, n. sp.

Female.—Black, densely and deeply punctured; head large, face and base of clypeus with glittering pubescence, the latter subconvex; mandibles rufous, black at tips, the inner edge with three obtuse teeth; palpi honey-yellow; antennæ short, clavate, entirely blackish; a transverse line, interrupted medially on prothorax, a round spot on each side of pleura, tegulæ, except a brown medial spot, and two spots on scutellum, white; metathorax rufous, silvery on the sides, deeply excavated posteriorly, the extreme lateral apical angles produced into a subacute spine; wings subhyaline, the costa narrowly fuliginous; legs entirely rufous, the posterior tarsi slightly dusky; abdomen with the apical margins of the first and second segments reflexed and narrowly whitish, as well as that of the third; basal segment companulate, convex, without any transverse carina and suture at base, rufous; second segment suddenly swollen, convex, its posterior whitish margin sinuous anteriorly, and is continued, narrowly, beneath; fourth and following segments entirely black. Length $3\frac{1}{2}$ lines.

One ♀ specimen.

23. *Odynerus oculatus*, Say.

Odynerus oculatus, Say, Bost. Jour. Nat. Hist. i, p. 385. Sauss., Mon. Guêpes Sol. Supp. p. 219.

One ♀ specimen. The first segment has an oblique spot on each side.

24. *Odynerus Toas*, n. sp.

Female.—Black, densely and deeply punctured; a lunate line at base of clypeus, spot at base of mandibles, another above insertion of antennæ, another in the emargination of eyes, and a short line on posterior orbits, pale yellowish-white; clypeus with longitudinal punctures, narrowed at tip which is subemarginate; apical half of mandibles ferruginous; palpi pale; antennæ with the scape whitish on the outside; two transverse spots on prothorax, tegulæ, except a dusky medial dot, a large spot beneath and a small spot behind tegulæ, postscutellum, and a transverse mark on each side of metathorax, pale yellowish-white; metathorax rugulose, truncate and subexcavate behind; wings hyaline or subhyaline, dusky along the costa, stigma and costal nerve reddish-brown; legs ferruginous, coxæ and part of trochanters black, tips of femora, base of tibiæ yellowish; apical margin of all the abdominal segments, except the last, yellowish, (that on the basal segment confluent with a lateral subtriangular spot; that on the second sinuous anteriorly,) and a sub-basal, transverse spot on each side of second segment, pale yel-

lowish-white; apical margin of latter segment reflexed; the second segment beneath with a yellowish apical margin, and the third with a lateral spot of the same color. Length 4 lines.

Male.—Like the ♀, except that the clypeus, upper surface of mandibles, a line between antennæ dilated and sub-bilobed above, and the anterior orbits almost filling up the emargination but not extending above it, yellowish-white; the clypeus is smooth and emarginate at tip; the antennæ are black above, the scape yellowish-white beneath, the flagellum fulvous beneath, the apical joints gradually thickened, the eleventh joint emarginate beneath, the next suddenly smaller, and the apical joint hooked and subacute; the lateral spots on first and second segments of abdomen smaller and more oblique; beneath, the third segment has an entire apical yellowish margin. Length 4 lines.

One ♀, two ♂ specimens. Allied to *O. oculatus* Say. Belongs to the subgenus *Leionotus*.

25. *Pterochilus 5-fasciatus*, Say.

Pterochilus 5-fasciatus, Say, Long's Second Exped. iii, p. 347.

One ♀, two ♂ specimens.

26. *Pterochilus Lewisii*, n. sp.

Female.—Robust; head and thorax clothed with a pale fulvous pubescence; abdomen silvery sericeous in certain lights; head black, densely punctured, broad posterior orbits, narrow anterior orbits from the emargination down, the clypeus entirely, and the mandibles, except tips, and the base and lower margin beneath, bright ferruginous; clypeus subconvex, sparsely punctured, pubescent, the tip produced and truncate; mandibles large, long, acute at tip, with four obtuse teeth on the inner edge before the tip, the outer surface with two oblique carinæ, and the lower margin fringed with long yellow hairs; maxillæ blackish, their palpi fulvous, the apical joints fringed with very long hairs; antennæ black, the two basal joints bright ferruginous; thorax very densely punctured, black, the upper half of prothorax, spot beneath anterior wing, two large, almost confluent spots on scutellum, and the sides of the metathorax, bright ferruginous; postscutellum and tegulæ, except a central darker spot, yellowish-ferruginous; metathorax short and very abrupt; wings subhyaline, varied with fuliginous, the costa and base stained with yellowish, subviolaceous; legs short and stout, ferruginous, the coxæ and trochanters black, the four posterior tibiæ and base of tarsi covered with short spines; abdomen robust, sessile, very densely punctured; first and second segments dull ferruginous, with their apical margins bright yellow, and a larger black spot

on their basal middle, that on the first segment longitudinal and even; that on the second transverse, angular on the sides and acutely pointed behind; the yellow posterior margin of the second segment is slightly and squarely emarginate on each side anteriorly; remaining segments bright lemon-yellow, the third and fourth more or less black at base; the two apical segments are tinged with orange and the third to fifth segments have a transverse orange spot on each side; beneath ferruginous, with a lateral yellow spot at tip, and a large semicircular black mark on the base of the second segment. Length $8\frac{1}{2}$ lines.

One ♀ specimen. This fine species resembles *P. 5-fasciatus* Say, but is quite distinct.

27. *Polistes Navajoe*, n. sp.

Female.—Head pale yellow, the venter, occiput and tips of mandibles, black; a yellow spot, confluent with the orbits, on each side behind the ocelli; clypeus rounded and ciliated anteriorly, sparsely punctured and pubescent; cheeks tinged with fulvous; antennæ fulvo-ferruginous, the middle of flagellum black; thorax velvety-black; posterior margin of the prothorax, broader in front, tegulæ and scutellum ferruginous; the mesothorax has sometimes a faint reddish stain on each side; metathorax pubescent, obliquely striated, with a deep central, longitudinal channel; wings fuscous, ferruginous along the costa and at base, subviolaceous, nervures and stigma ferruginous; legs black, tips of all the femora, the four anterior tibiæ, basal half of the posterior pair, and all the tarsi, tinged with fulvous; abdomen longer than the head and thorax, sericeous, the first and second segments above and beneath, except apical margins, broader on the second segment, and the basal margin of the third segment above and beneath, black; the remainder lemon-yellow; the anterior half of the apical margin of the second segment above is fulvous, shading gradually into the yellow, sometimes this margin is entirely fulvous; the third and remaining segments have a faint, central, longitudinal, fulvous streak and a lateral spot of the same color, that on the third segment sometimes very distinct. Length 9—10 lines.

Four ♀ specimens. This occurs also in Arizona.

28. *Polistes flavus*, n. sp.

Female.—Lemon-yellow, base of clypeus, vertex and cheeks tinged more or less with fulvous; clypeus subdepressed, subquadrate, sparsely punctured, each puncture giving out a short fulvous hair, apex angular, ciliated, the lateral angles with two teeth, the inner one the longest; tips of mandibles black; space between antennæ protuberant; anten-

næ entirely fulvous, darker above; mesothorax fulvous, the incisures and a longitudinal black line on the disk, abbreviated posteriorly, black, a faint line on each side of the disk and the lateral margins, yellow; prothorax faintly tinged with fulvous, its posterior margin yellow; metathorax with a deep central, longitudinal channel; tegulæ with a median, fulvous dot; wings varied with fuliginous, darker along the costa, a bright violaceous reflection, base of both wings, a narrow, longitudinal streak through the middle of the wing, and most of the second submarginal cell, subhyaline; stigma, costal vein from the stigma to the base and the nervures at the base of the wing, fulvous, the rest black; legs faintly tinged with fulvous at base and on the tarsi; abdomen bright lemon-yellow, not longer than head and thorax, subsericeous, a central longitudinal streak posteriorly, a spot at base of first segment, a narrow line across its middle, slight stains on each side of first and second segments at base, a transverse spot on each side near the apex of the second to fifth segments connected by a slender arcuated line (both above and beneath), fulvous; basal segment triangular, its apical breadth equal to its length. Length 9 lines.

One ♀ specimen.

29. *Andrena mellea*, n. sp.

Female.—Honey-yellow, clothed with pale appressed pubescence, especially dense at the sides of the face, on the legs and apical margins of abdominal segments; head black, the clypeus, spot above, mandibles at base and stains on the cheeks, honey-yellow; clypeus sparsely punctured, its anterior margin subarcuate; antennæ short, blackish at tips; thorax closely punctured, mesothorax longitudinally impressed anteriorly; metathorax truncate behind and stained with blackish down the posterior middle, the sides and the pleura entirely, black; wings fuscohyaline, subviolaceous, the costa broadly fuscous, nervures brown, stigma and costal nerve honey-yellow; third submarginal cell much longer than the second, narrowed for one-half its length toward the marginal and receiving the second recurrent nervure near the apex; legs entirely honey-yellow, the tibiæ and tarsi densely clothed with yellow pubescence; abdomen large, ovate, depressed, densely and finely punctured, the apical margin of the second, and the following segments entirely, more dense on their apical margins, densely clothed with pale yellowish, appressed pubescence; the first and rest of second segment without pubescence (probably denuded); a narrow, sub-basal, blackish fascia on the second and two following segments, the base of the first segment, and middle of apical segment, black; venter entirely honey-yellow. Length 6 lines. One ♀ specimen.

30. *Nomia Nortoni*, n. sp.

Female.—Black; sides of face, cheeks, thorax anteriorly, posteriorly and laterally, the legs, and base of abdomen, densely clothed with ochreous-yellow pubescence; antennæ short, with the flagellum testaceous beneath; thorax rather closely and deeply punctured, scutellum sparsely so, the latter impressed medially, (the mesothorax and scutellum are shining and may be denuded of pubescence); metathorax truncate; wings subhyaline, their apical margins fuliginous, nervures brown-black; second submarginal cell small, quadrate, the third as long as the first and narrowed one-half toward the marginal, receiving the second recurrent nervure between the middle and apex; legs robust, densely pubescent, especially the posterior pair, posterior tarsi golden within; abdomen ovate, shining, subconvex, the apical half or one-third of the segments transversely impressed; second, third and fourth segments each with a beautiful emerald green apical margin; apical segments with black pubescence; ventral segments fringed with ochreous pubescence. Length $7\frac{1}{2}$ lines.

Male.—Differs much from the ♀; the head is smaller, with the face densely clothed with ochreous pubescence; the antennæ are nearly as long as the head and thorax, gradually attenuated to the tip, bright fulvous, the scape above and a line on the flagellum above, brown-black, the scape densely pubescent beneath, the joints very distinctly defined, the terminal joint nearly as long as the basal joint and pointed at tip; the anterior half of the mesothorax is densely clothed with fulvo-ochraceous pubescence; the four anterior tibiæ in front and their tarsi are honey-yellow; the posterior femora are short and enormously swollen, being almost globose exteriorly, but are concave within; their tibiæ are short, dilated posteriorly, and are dilated at tip beneath into an irregularly shaped process, which is deeply excavated beneath the insertion of the tarsi, and present, on the inner edge, three long, acute spines; the tibiæ are yellow, black at base; their tarsi are yellow, dusky at tips, the basal joint very long, flat, and broader at base; the abdomen is more depressed and subparallel, clothed, especially at base, with short pale pubescence; the apical fasciæ of the second, third and fourth segments are of a paler green, and the fifth segment has also a greenish fascia, which does not, however, extend the whole width of the segment; apex densely clothed with black pubescence; the apical segment is emarginate at tip; beneath, the second and third segments present broad, flattened, slightly concave plates, each with a sharply impressed line down the middle, the sides are densely pubescent. Length $7\frac{1}{4}$ lines.

One ♀ specimen. Described from three ♀, and one ♂, specimens. The ♂ and one ♀ was found in Colorado by Mr. James Ridings, and one ♀, in the collection of Mr. Edward Norton, is from Kansas.

31. *Nomia*? *apacha*, n. sp.

Female.—Black, shining, the head, sides of thorax, mesothorax, postscutellum, legs, sides and apex of abdomen and the apical margins of all the segments, densely clothed with short, dull yellowish pubescence; second joint of antennæ dull rufous; metathorax truncate and subexcavate behind; tegulæ very large and pale fulvous; wings yellowish-hyaline, the apical margin fuscous, stigma and costal nerve fulvous; tibiæ and tarsi more or less fulvous, the posterior legs with the pubescence long and dense, basal joint of tarsi large and flat, claws cleft; abdomen oblong-ovate, subconvex, the segments transversely impressed at base and apex, the first segment deeply and angularly excavated at base and transversely impressed on the middle; apical margins of the first and second segments rufo-testaceous and pubescent only on the sides; ventral segments densely fringed with long dull fulvous pubescence. Length 7 lines.

One ♀ specimen. This also occurs in Colorado.

32. *Perdita*? *albipennis*, n. sp.

Female.—Head and thorax dark metallic green, the latter above brassy-green; rather thickly clothed with erect whitish pubescence; clypeus polished, tinged with purplish at tip, a longitudinal yellow line down the middle and a transverse yellow spot on each side; mandibles long, curved at tip, fulvous on the middle; antennæ short, black above, testaceous at tip and beneath, the scape yellow beneath; a subinterrupted line on prothorax, and the tubercles, yellow; tegulæ testaceous; wings whitish-hyaline, with an opaline iridescence, nervures and stigma white; wing-cells arranged as in *Perdita*, except that the marginal cell is a little longer; legs black, paler at tips, thickly clothed with pale pubescence, especially long and dense on the four posterior tibiæ; abdomen ovate, flat, blackish, apical margins of segments subtestaceous, a dot on each side of first segment, a broad band at base of the four following segments, slightly sinuous behind and narrowest on second segment, lemon-yellow; apical segments pale fulvous, clothed with whitish pubescence; beneath, the segments are blackish, with pale apical margins, and subpubescent. Length $3\frac{1}{2}$ lines.

One ♀ specimen. Also found in Colorado.

33. *Anthidium occidentale*, n. sp.

Female.—Black, densely punctured, head and thorax clothed with a dense white pubescence, long on the cheeks and sides of the meta-

thorax, and tinged with yellowish on the vertex and mesothorax; anterior orbits, dilated below, and a large triangular spot on each side of the clypeus, white; one specimen has the clypeus entirely white, while another has it white with a black mark at base; lateral margins of the mesothorax and two small round spots on the scutellum, yellowish-white; wings subhyaline, slightly stained with yellowish, the marginal cell, the apical margin of both wings broadly fuliginous; legs black, the coxæ and femora clothed with white pubescence and the tibiæ and tarsi with golden pubescence; tip of the anterior femora and their tibiæ within and generally the intermediate tibiæ within, fulvous; abdomen shining, more finely punctured than the head and thorax, clothed above with a short yellowish pubescence, long and white at base; the first five segments each with an apical yellow fascia, broad at the sides and attenuated toward the middle, interrupted on the middle of the first segment, and emarginate on each side of the first three segments, the fasciæ on the fourth and fifth segments are the broadest; sixth segment with a large yellow mark, deeply notched anteriorly; venter with a very dense clothing of fulvous hairs, becoming whitish toward the base. Length 5—6 lines.

Male.—Same as the ♀, except that the face is clothed with a long dense white pubescence, the anterior orbits, clypeus and mandibles, except tips, are white; the mesothorax is margined laterally with whitish in one specimen only, and the scutellum is immaculate in all the specimens; the tibiæ have a white spot at base and are tipped with white, with a ferruginous spot at the extreme apex; tarsi white, dusky at tips; the fasciæ on the first four segments are slightly emarginate on each side anteriorly, and that on the fifth segment is broad, slightly constricted in the middle; the sixth segment is yellow, emarginate anteriorly with black, the apical edge is recurved and rounded; apical segment and venter black. Length same as ♀.

Described from four ♀, four ♂ specimens. Also taken in Colorado.

34. *Anthidium maculifrons*, Smith.

Anthidium maculifrons, Smith, Brit. Mus. Cat. ii, p. 214. Cresson, Proc. Ent. Soc. Phil. iii, p. 375.

One ♂ specimen.

35. *Anthidium atrifrons*, n. sp.

Female.—Black, densely and very finely punctured, clothed with a dense whitish pubescence, that on the vertex and thorax above tinged with fuscous; head entirely black, except a white spot at the summit of each eye; anterior margin of the clypeus denticulated; four elongate spots on the margin of the scutellum, the tubercles and the tegulæ,

except a central black spot, white; wings subhyaline, costal half of the marginal cell fuliginous; nervures black; legs black, all the tibiæ with an exterior white streak, the tarsi densely clothed with white pubescence exteriorly and brownish within; abdomen clothed above with a short, thin, white pubescence, more dense at the base, each segment has a subapical whitish fascia, dilated on the extreme sides, all of them slightly interrupted in the middle, and emarginate on each side anteriorly, except that on the first segment, which encloses a black dot; the fasciæ become broader on the apical segments; ventral scopa short and white or yellowish-white.

Described from four ♀ specimens. Also taken in Colorado.

36. *Epeolus remigatus*, Fabr.

Melecta remigata, Fabr., Syst. Piez. p. 387. Cresson, Proc. &c. iii, p. 393.

One ♀ specimen.

37. *Melissodes mennachus*, n. sp.

Male.—Black; head, thorax and legs densely clothed with a long ochreous or fulvo-ochraceous pubescence, the apical margins of the abdominal segments fringed with a short dense, pubescence of the same color; clypeus entirely, and a spot at base of mandibles, pale yellowish; antennæ three-fourths the length of the body, bright fulvo-testaceous, darker and sometimes blackish above, the base blackish; wings hyaline, the nervures, as well as the tegulæ, pale fulvous; legs thickly pubescent, tarsi more or less fulvous; abdomen ovate, thinly clothed, except at apex, with ochreous or fulvo-ochraceous pubescence; the depressed, apical margins of the segments pale testaceous; on the extreme lateral, basal margin of the fifth segment a short angular acute tooth, and a smaller one at the base of the sixth segment, the apex of this segment is concave, with the sides acutely reflexed and its tip truncate; venter brownish, with the apical margin of the segments fringed with ochreous pubescence. Length 5—5½ lines.

Two ♂ specimens. Also found in Colorado.

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ERRATA et CORRIGENDA.

Page 5, line 33, for particular read particularly.

8, line 7, for so speak read so to speak.

8, line 13, *dele* comma after to.

13, line 28, for syringaria read syringaria.

14, line 18, for Authros read Authors.

16, line 1, insert a semicolon after downwards.

26, line 15, for fluently read faintly.

26, line 21, for anterior read posterior.

27, line 13, for interal read internal.

50, line 19, for 171 read 179, 1.

50, line 21, for 671 read 674.

54, line 24 for Sel. read Serv.

63, line 23, for twelve pectoral read twelve abdominal.

64, line 3, *cæruleus* should be under heading A instead of B.

67, line 6, for 268 read 298.

69, line 3, for venter read vertex.

69, line 41, for *procera* read *poecila*.

71, to line 25 add the following references:—

Klug, Berl. Mag. vi, 300, 26. Lepel., Mon. Tenth. 48, 136.

73, line 1, for 249 read 240.

73, line 34, for *Pteroma* read *Pteronus*.

76, line 15, for the entire tarsi read the entire tarsi.

78, line 20, for *atripes* read *albipes*.

193, line 4, for Page 31 read Page 84.

204, line 3, for 0.22—.26 inch read 0.11—.13 inch.

224, lines 6 and 27, for Am. read Ann.

225, line 1, for piliform read filiform.

246, line 32, for *linutaria* read *limitaria*.

256, line 6, for s read is.

266, line 41, for 18 read ix.

286, line 7, for Plate IV read Plate V.

288, line 37, for 186, read 1862.

325, line 23, after dark insert blue.

340, line 11, for clean read clear.

345, line 1, for *lroea* read *loreæ*.

377, line 26, for *Lewisii* read *Lecontei*.